REAL ESTATE AND CONSTRUCTION DIVISION

ITEM OF INTEREST FOR OL STAFF MEETING NOTES

27 April 1984

"A CASE OF MURPHY'S LAW"

A site chilled water outage was scheduled from 1800 hours on Friday, 30 March 1984, through 0600 hours on Monday, 2 April 1984, to connect the new Northside chilled water lines to the existing systems in the Power Plant, Headquarters Building, and Printing and Photography (P&P) Building. Mobile chillers were rented to provide air conditioning to the SAFE Computer Center during the outage.

The outage began at approximately 2230 hours as problems were experienced in making the mobile chillers operational. Therefore, GSA was not able to secure the Power Plant and begin drain down of the chilled water system until 2330 hours. The Contractor was scheduled to begin work at 0700 hours on 31 March through 1800 hours on 1 April. However, by 0700 hours on 31 March, only the Power Plant had been drained sufficiently to allow the Contractor to begin work. GSA finally drained the P&P and Headquarters Building systems and the Contractor began work in these locations at 1300 hours on 31 March. The Contractor completed all tie-in work by 0600 hours on 1 April 1984, approximately 12 hours ahead of schedule.

GSA had the chilled water system refilled and started the Power Plant chillers and cooling towers at approximately 2300 hours on 1 April. Approximately 30 minutes later, GSA noticed water bubbling up out of the ground at the base of the cooling tower indicating a leak in the condenser water piping. E. J. Murray, the mechanical contractor installing the Northside utility lines, was called in for emergency repairs at approximately 0200 hours on 2 April. The leak was found to be in a 2-inch drain line which runs from the underground 30-inch condenser water mains to the cooling tower sump. The valve to this line was closed circa 1100 hours on 2 April and the water stopped bubbling out of the ground. Thus, the problem was thought to have been corrected circa 1100 hours on 2 April and GSA began bringing the Power Plant on line.

At approximately 1300 hours on 2 April, the backup chiller systems serving the GC03, GC57, and 1D16 computer centers dropped off line. The resulting high chilled water temperature caused the backup system to attempt to switch back to the

Power Plant (two chillers at the power plant were on at the time supplying 50° chilled water temperature to the building). However, one of the isolation valves in the backup system failed to open and precluded any cooling from the Power Plant. As a result, the GC03, GC57, and 1D16 computer centers overheated and ceased operation.

At approximately 1500 hours on 2 April, the below ground leak reappeared and E. J. Murray was recalled to resume repair work. Repair work from this point through 3 April was concentrated in finding the precise location of the leak. All excavation was done by hand due to the extreme underground congestion with ductbanks, conduit, etc. The leak was located at approximately 1500 hours on 3 April at the point where the 2-inch drain line connected to the bottom of the 30-inch condenser supply line to the Power Plant. A site chilled water outage was scheduled for 1700 hours on 3 April and commenced at 1730 hours. It took GSA approximately 4 1/2 hours to drain the condenser water system. The Contractor repaired the leak by cutting out a top section of the 30-inch line and welding a cover plate over the drain line opening to the inside bottom of the 30-inch line. During this time period, a leak in a 6-inch above ground valve and nipple in the condenser water supply line at condenser pump No. 4 was also repaired. GSA began bringing the Power Plant back on line and all systems were operating normally by 1200 hours on 4 April.

The SAFE Computer Center went out of operation twice due to problems with the mobile chillers. A problem with excessive air and inadequate make-up water on Saturday, 31 March, resulted in a SAFE outage from approximately 0900 through 1300 hours. Chiller operator error resulted in a SAFE outage from 0300 hours through 0600 hours on 3 April. The mobile chillers were disconnected from the SAFE chilled water system at 1100 hours on 4 April 1984.

ROUTING AND RECORD SHEET

SUBJECT: (Optional)

RECD ITEM - D/L STAFF MTG - SEPT 27

FROM:

C/RECD

EXTENSION | NO.

DATE 4/17/84

TO: (Officer designation, room number, and building)	DATE RECEIVED	DATE FORWARDED	OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
1. NINA:				
2.				
3. PER VERNIE'S SUGGESTION (YELLOW NOTE ATTACHED),				
4. PLEASE USE THE ATTACHED MFR CONTENT				
5. FOR OUR RECD SPECIAL ITEM FOR THE				
6. D/L SEPT 27 STAFF MTG NOTES.				
7. REMOVE THE MFR FORMAT AND ADD				
8. THE SPECIAL ITEM FORMAT AS BEFORE.				
9. TYPE CONTENT AS STATED. LET PETE KNOW				
10. SO HE CAN BE PREPARED TO SPEAK TO				
11. IT AT D/L STAFF MTG IF REQUIRED. INTENT OF				
12. THIS SUBMISSION IS TO EXEMPLIFY THE				
13. REALITIES OF "MURPHY'S LAW" DESPITE ALL THE				
14. PRECAUTIONS ONE ~~MAKE~~ MAY TAKE TO PREVENT				
15. PROBLEMS FROM OCCURING.				

Tony 4/17/84

FORM 1-79 610 USE PREVIOUS EDITIONS

Tony 4/17/84

18 APR 1984

MEMORANDUM FOR THE RECORD

SUBJECT: Chilled Water Outage for Northside Utility Lines

1. A site chilled water outage was scheduled from 1800 hours on Friday, 30 March 1984, through 0600 hours on Monday, 2 April 1984, to connect the new Northside chilled water lines to the existing systems in the power plant, Headquarters Building, and Printing and Photography (P&P) Building. Mobile chillers were rented to provide air conditioning to the SAFE Computer Center during the outage.

2. The outage began at approximately 2230 hours as problems were experienced in making the mobile chillers operational. Therefore, GSA was not able to secure the power plant and begin drain down of the chilled water system until 2330 hours. The Contractor was scheduled to begin work at 0700 hours on 31 March through 1800 hours on 1 April. However, by 0700 hours on 31 March, only the power plant had been drained sufficiently to allow the Contractor to begin work. GSA finally drained the P&P and Headquarters Building systems and the Contractor began work in these locations at 1300 hours on 31 March. The Contractor completed all tie-in work by 0600 hours on 1 April 1984, approximately 12 hours ahead of schedule.

3. GSA had the chilled water system refilled and started the power plant chillers and cooling towers at approximately 2300 hours on 1 April. Approximately 30 minutes later, GSA noticed water bubbling up out of the ground at the base of the cooling tower indicating a leak in the condenser water piping. E.J. Murray, the mechanical contractor installing the Northside utility lines, was called in for emergency repairs at approximately 0200 hours on 2 April. The leak was found to be in a 2-inch drain line which runs from the underground 30-inch condenser water mains to the cooling tower sump. The valve to this line was closed circa 1100 hours on 2 April and the water stopped bubbling out of the ground. Thus the problem was thought to have been corrected circa 1100 hours on 2 April and GSA began bringing the power plant on line.

4. At approximately 1300 hours on 2 April, the backup chiller systems serving the GC03, GC57, and 1D16 computer centers dropped off line. The resulting high chilled water temperature caused the backup system to attempt to switch back to the power plant (two chillers at the power plant were on at the time supplying 50°F chilled water temperature to the building). However, one of the isolation valves in the backup system failed to open and precluded any cooling from the power plant. As a result, the GC03, GC57, and 1D16 computer centers overheated and ceased operation.

SUBJECT: Chilled Water Outage for Northside Utility Lines

5. At approximately 1500 hours on 2 April, the below ground leak reappeared and E.J. Murray was recalled to resume repair work. Repair work from this point through 3 April was concentrated in finding the precise location of the leak. All excavation was done by hand due to the extreme underground congestion with ductbanks, conduit, etc. The leak was located at approximately 1500 hours on 3 April at the point where the 2-inch drain line connected to the bottom of the 30-inch condenser supply line to the power plant. A site chilled water outage was scheduled for 1700 hours on 3 April and commenced at 1730 hours. It took GSA approximately 4 1/2 hours to drain the condenser water system. The Contractor repaired the leak by cutting out a top section of the 30-inch line and welding a cover plate over the drain line opening to the inside bottom of the 30-inch line. During this time period, a leak in a 3-inch above ground valve and nipple in the condenser water supply line at condenser pump No. 4 was also repaired. GSA began bringing the power plant back on line and all systems were operating normally by 1200 hours on 4 April.

6. The SAFE Computer Center went out of operation twice due to problems with the mobile chillers. A problem with excessive air and inadequate make-up water on Saturday, 3 March, resulted in a SAFE outage from approximately 0900 through 1300 hours. Chiller operator error resulted in a SAFE outage from 0300 hours through 0600 hours on 3 April. The mobile chillers were disconnected from the SAFE chilled water system at 1100 hours on 4 April 1984.

STAT [redacted]

cc: C/LSD/OL

Distribution:
Orig - OL/RECD/HEB Official
1 - OL/RECD/HEB Chrono

STAT OL/RECD/HEB [redacted] (6 Apr 84)

ROUTING AND TRANSMITTAL Date 4/13/87

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. C/IAS/HEB	RC	4/13
2. C/HEB		4/13
3. DC/ICECD		4/17
4. C/ICECD		4/17
5. Orig - Please return to HEB		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

TONY

SUGGEST THIS MEMO BE USED TO SUPPLEMENT D/L STAFF MTG NOTES.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
HEB	3E24 HQS.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ GPO : 1981 O - 361-529 (148)

STAT